

NEW CONTINUOUS PROCESS FOR THE MANUFACTURING, DOSING AND PACKAGING OF 'JIJONA TURRON'

P PATENTED TECHNOLOGY



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ABSTRACT

The group has developed an innovative continuous and automatic process for manufacturing, dosing and packaging 'Jijona Turron'. The pre-industrial model developed can produce approximately 200 kg/h, and consists of a twin screw extruder which produces the raw materials mixture required for the production of nougat, increasing considerably the production (The process takes several minutes and is automatic so no labor is required), improving the hygienic quality of the product and giving greater uniformity to the nougat obtained.

ADVANTAGES AND INNOVATIVE ASPECTS

- Considerable increase in the production. The final duration of the process is reduced from 1 hour or 1 h. ½ to a few minutes. This is the total time the material will stay in the extruder.
- Process automation. As stated before, the product viscosity varies greatly during the process and this fact can be used to improve the process control and automation, resulting in several benefits such as:
 - Smaller personnel required, increasing the productivity of the installation
 - More uniformity in the final product thanks to a greater control and to a continuous process
 - Automated dosing, reducing its manipulation and the excess of material required for its fixed weight.
- Improvement in the hygienic quality of the product. There is a constant human manipulation in the current method. This will be reduced with our new method by means of extrusion, that may also serve for the global automation of the whole plant. So, as it is recommendable in the Food industry, the product would be in contact just with isolated equipment, generally made of Teflon or high-quality stainless steel. This way hygienic conditions will improve considerably.

The current method is almost fully traditional, using very old and inappropriate equipment. For this reason, the product elaboration requires human manipulation of the raw material. Some enterprises have incorporated modern technology, but the need for a continuous cooking process has not been solved yet. Therefore, the enterprise acquiring this new technology or know-how will be in a privileged situation in this sector.

MARKET APPLICATIONS

Continuous manufacturing of Jijona Turron. Possible development of a fully automated dosing and packaging process. Improvement in the uniformity of the product quality.

COLLABORATION SOUGHT

Selling this new technology to an enterprise and/or improving it through R&D projects.
